



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
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D2282-7

Job Sheet 204248



Part No: D2282-7

Job Qty: 160 pcs

Part Name: Tube



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/5/19

Job Tracking No:

Created By: Marie Lajeunesse

Due Date: 1/22/20

Description:

Type: SOLD

Note: DWG REV E IPP Rev:A Removed from 9 Digit 05-12-02 JLM

Ship Via:

## Bill of Materials

## Job Routing

| Op No | Operation                           | Qty     | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|-------------------------------------|---------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                                     |         |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 100   | Hardinge - 1                        | 160 pcs | 1/22/20    | 1/22/20  | 0.02      | 4.17    | Hardinge - 1          |           | JBD 20/1/12 |
| 120   | QC 8                                | 160 pcs | 1/22/20    | 1/22/20  | 0.00      | 0.00    | QC 8 - 12             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 14             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 17             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 20             |           | JL 20-01-13 |
|       |                                     |         |            |          |           |         | QC 8 - 25             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 3              |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 32             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 33             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 35             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 39             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 4              |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 44             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 45             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 49             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 58             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 8              |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 9              |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 68             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 67             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 1 (A)          |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 47             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 40             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 52             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 23             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 57             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 76             |           |             |
|       |                                     |         |            |          |           |         | QC 8 - 61             |           |             |
| 130   | Packaging 3-1 - Stock - B4B 160 pcs |         | 1/22/20    | 1/22/20  | 0.00      | 0.00    | Packaging 3 - 1 - B4B |           |             |
|       |                                     |         |            |          |           |         | Packaging 3 - 2 - B4B |           |             |
|       |                                     |         |            |          |           |         | Packaging 3 - 3 - B4B |           |             |



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Container No: S246773



Part: D2282-7

Job No: 204248

Serial No/Batch: S246773

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 01/13/20

|                                                                                                                                                                                                                                                                              |                                            |                         |                  |                        |                         |         |           |                 |                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------|------------------|------------------------|-------------------------|---------|-----------|-----------------|------------------|
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 4 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 5 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 6 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 7 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 8 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 9 - B4B  |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 10 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 11 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 12 - B4B | EA                      |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 13 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 14 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 15 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 16 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 17 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 18 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 19 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 20 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 21 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 22 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 23 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 24 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 25 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 26 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 27 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 28 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 29 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 30 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 31 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 32 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 33 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 34 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 35 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | Packaging 3 - 36 - B4B |                         |         |           |                 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  | 140 QC 21 - SA         | 160 pcs                 | 1/22/20 | 0.00 0.00 | QC 21 - SA - 21 | DAS<br>21<br>C-9 |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  |                        |                         |         |           | QC 21 - SA - 70 |                  |
|                                                                                                                                                                                                                                                                              |                                            |                         |                  |                        |                         |         |           | QC 21 - SA - 53 |                  |
| Part Op 100 - (Hardinge) 1-Turn as per Dwg D2282 and Folio FA190<br>Descriptions: 120 - (QC8- Inspect parts - second check)<br>130 - (Identify as per dwg & Stock Location: <u>WAPOL-1</u> ) ***STOCK IN LARGE FAB***<br>140 - (QC21- Final Inspection - Work Order Release) |                                            |                         |                  |                        |                         |         |           |                 |                  |
| <b>Job BOM</b>                                                                                                                                                                                                                                                               |                                            |                         |                  |                        |                         |         |           |                 |                  |
| <b>Part / Item</b>                                                                                                                                                                                                                                                           | <b>Component Name</b>                      | <b>Quantity</b>         | <b>Operation</b> | <b>Container</b>       |                         |         |           |                 |                  |
| M304P0.675W.091                                                                                                                                                                                                                                                              | 304/316 Pipe .675 OD x .091 Wall Thickness | 10.6560 ft (.0666 ea)   | 100-Hardinge - 1 | S153026                |                         |         |           |                 |                  |
| <b>Job Allocations</b>                                                                                                                                                                                                                                                       |                                            |                         |                  |                        |                         |         |           |                 |                  |
| <b>Operation</b>                                                                                                                                                                                                                                                             | <b>Component Part</b>                      | <b>Required</b>         | <b>Inventory</b> | <b>Allocated</b>       |                         |         |           |                 |                  |
| 100-Hardinge - 1                                                                                                                                                                                                                                                             | M304P0.675W.091                            | 11                      | 31               | 0                      |                         |         |           |                 |                  |
| <b>Part Specifications</b>                                                                                                                                                                                                                                                   |                                            |                         |                  |                        |                         |         |           |                 |                  |
| <b>Spec No</b>                                                                                                                                                                                                                                                               | <b>Description</b>                         | <b>Target/Tolerance</b> | <b>Limits</b>    | <b>Type</b>            | <b>Special Comments</b> |         |           |                 |                  |
| 1                                                                                                                                                                                                                                                                            | Handle Tube                                | 0.795Inches ± 0.010     | 0.805<br>0.785   |                        |                         |         |           |                 |                  |
| 2                                                                                                                                                                                                                                                                            | Handle Tube                                | 0.493Inches ± 0.010     | 0.503<br>0.483   |                        |                         |         |           |                 |                  |
| 3                                                                                                                                                                                                                                                                            | Handle Tube                                | 0.675Inches ± 0.010     | 0.685<br>0.665   |                        |                         |         |           |                 |                  |

Plex 12/5/19 10:21 AM Dart.lajeunesse.marie

Entered: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                      |  |                                                                                         |  |                      |  |              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------|--|-----------------------------------------------------------------------------------------|--|----------------------|--|--------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> |  | <b>DEPARTMENT/PROCESS</b><br><div style="display: flex; justify-content: space-between;"> <div>                     Skid-tube <input type="checkbox"/><br/>                     Machining <input type="checkbox"/><br/>                     Large Fab <input type="checkbox"/> </div> <div>                     Cross tube <input type="checkbox"/><br/>                     Small Fab <input type="checkbox"/><br/>                     Finishing <input type="checkbox"/> </div> <div>                     Eng. (Non-AW)<br/>                     Prod. Eng. Coord.<br/>                     Rec/Store/Packaging                 </div> <div>                     Engineering <input type="checkbox"/><br/>                     Water Jet <input type="checkbox"/><br/>                     Supplier <input type="checkbox"/><br/>                     Quality <input type="checkbox"/> </div> </div> |  |                      |  | Date : _____ Sequence #: _____                                                          |  | QTY Affected : _____ |  | MRB (QS1042) |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <b>Disposition</b>   |  | Completed By _____<br><br>Lead hand / Supervisor _____<br><br>QC / QA Coordinator _____ |  |                      |  |              |  |
| <b>Root Cause</b><br><div style="display: flex; justify-content: space-between;"> <div>                     Operator <input type="checkbox"/><br/>                     Manufacturing Process <input type="checkbox"/><br/>                     Equip/Tooling <input type="checkbox"/><br/>                     Handling/Preservation <input type="checkbox"/><br/>                     Material <input type="checkbox"/><br/>                     Product Improvement <input type="checkbox"/><br/>                     Process Improvement <input type="checkbox"/><br/>                     Human Factors <input type="checkbox"/> </div> <div>                     Pressure/Forced <input type="checkbox"/><br/>                     Bending <input type="checkbox"/><br/>                     Crushing <input type="checkbox"/><br/>                     Cracks <input type="checkbox"/><br/>                     Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/><br/>                     Marks/Chatter <input type="checkbox"/><br/>                     Mislabeled <input type="checkbox"/> </div> <div>                     Contamination <input type="checkbox"/><br/>                     Misaligned/off center <input type="checkbox"/><br/>                     BOM/Route <input type="checkbox"/><br/>                     Broken/Damage/Defect <input type="checkbox"/><br/>                     Incomplete/Unclear Instructions <input type="checkbox"/><br/>                     Drill Holes <input type="checkbox"/><br/>                     Fit/Function <input type="checkbox"/> </div> <div>                     Power Loss/Surge <input type="checkbox"/><br/>                     Folio/Program <input type="checkbox"/><br/>                     Grain Direction <input type="checkbox"/><br/>                     Weld <input type="checkbox"/><br/>                     Wrong Stock Pulled <input type="checkbox"/><br/>                     Out of Sequence <input type="checkbox"/><br/>                     Off-set/Set-up <input type="checkbox"/> </div> <div>                     Positioned Wrong <input type="checkbox"/><br/>                     Outside Tolerance <input type="checkbox"/><br/>                     Drawing <input type="checkbox"/><br/>                     Finish <input type="checkbox"/><br/>                     Part Lost/Missing <input type="checkbox"/><br/>                     Misread <input type="checkbox"/> </div> </div> |  |                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Other/Details: _____ |  |                                                                                         |  |                      |  |              |  |